REVIEW

Precursors to the PANSS: The BPRS and its progenitors

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ABSTRACT

The systematic assessment of signs and symptoms of psychopathology has roots that date back to rating scale development that began in the 1950s. This article reviews some of those rating scales. The focus is on the Brief Psychiatric Rating Scale, which is the most important precursor of the Positive and Negative Symptom Rating Scale.

KEYWORDS: The Positive and Negative Syndrome Scale, PANSS, the Brief Psychiatric Rating Scale, BPRS, 7-point Likert scale, factor analysis of data, psychometrics, schizophrenia, symptom assessment

These are the generations of Shem: Shem was an hundred years old, and begat Arphaxad two years after the flood: And Shem lived after he begat Arphaxad five hundred years, and begat sons and daughters: And Arphaxad lived five and thirty years, and begat Salah: And Arphaxad lived after he begat Salah four hundred and three years, and begat sons and daughters. And Salah lived thirty years, and begat Eber.

—Genesis, Chapter 11, King James Version (1611 copyright expired)

This issue of Innovations in Clinical Neuroscience reviews the Positive and Negative Syndrome Scale (PANSS) on the occasion of the 30-year anniversary of the first publication of the PANSS.[1] Included articles look both at the remarkable utility of the scale in the development of new antipsychotic medications and other treatments in schizophrenia and psychotic disorders as well as to consider its future. The goal of this contribution is to consider some of the origins of the PANSS.

UNIFORM LIKERT SCALING

Sixteen of the 30 items in the PANSS come from the original Brief Psychiatric Rating Scale (BPRS).[2] The BPRS itself was derived from longer and earlier scales developed by Maurice Lorr and his colleagues—the Inpatient Multidimensional Psychiatric Scale (IMPS) and the Multidimensioal Scale for Psychopathology (MSPP).[3–5] The IMPS, which was used in some of the earliest studies of antipsychotic (then neuroleptic) medications in schizophrenia, included 75 items. As was common in rating scales in those days, the scaling was not uniform among items; some were scaled along a severity dimension and some offered simple "yes" or "no" options. The BPRS introduced the uniform 7-point Likert scaling for all items and the naming of the rated scale points that continues in the PANSS. Although the severity anchors in the BPRS are uniform, ranging from 1 (not at all) to 7 (extremely severe), the anchor points themselves were not defined.

ASSESSMENT SPECIFICITY

The "items" in the BPRS are actually factor names that were conferred by the researchers on the factors that they extracted from the IMPS and MSPR. The resulting factor analyses yielded 14 factors that were augmented by two additional items deemed critical by a panel of experts assembled to rate the new scale that John Overall (an experimental psychologist) and Don Gorham (a clinical psychologist) were developing. The two added items were Unusual Thought Content (Item G9 in the PANSS) and Blunted Affect (Item N1 in the PANSS). The 1962 Overall and Gorham article divided the items into two broad groups: those to be evaluated by observation and those that required direct questioning. They also included some relatively extended descriptions of what to look for and what to ask about.

Tension. It should be noted that the construct "tension" is restricted in the Brief Scale to physical and motor signs commonly associated with anxiety. Tension does not involve the subjective experience or mental

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state of the patient. Although research psychologists, in an effort to attain a high degree of objectivity, frequently define anxiety in terms of physical signs, in the Brief Scale, observable physical signs of tension and subjective experiences of anxiety are rated separately. Although anxiety and tension tend to vary together, developmental research with an earlier form of the Brief Scale indicated that the degree of pathology in the two areas might be quite different in specific patients. A patient, especially when under the influence of a drug, might report extreme apprehension but give no external evidence of tension whatsoever, or vice versa. In rating the degree of tension, the rater should attend to the number and nature of signs of abnormally heightened activation level such as nervousness, fidgeting, tremors, witches, sweating, frequent changing of posture, hypertonicity of movements, and heightened muscle tone.

Grandiosity. Grandiosity involves the reported feeling of unusual ability, power, wealth, importance, or superiority. The degree of pathology should be rated relative to the discrepancy between self-appraisal and reality. The verbal report of the patient and not his or her demeanor in the interview situation should provide the basis for evaluation of grandiosity. Care should be taken not to infer grandiosity from suspicions of persecution or other unfounded beliefs where no explicit reference to personal superiority as the basis for persecution has been elicited. Ratings should be based upon opinions currently held by the patient, even though the unfounded superiority may be claimed to have existed in the past.

Although these definitions are extensive, the BPRS itself tended to be reproduced as a single page with briefer definitions and without specifically identifying items as based on verbal report or observation.

The original 16 items from the BPRS were augmented by two more items—Excitement and Disorientation—to create the 18-item scale that is most familiar to users. These later items are also included in the PANSS as Items P4 and G10. Additional items in the PANSS have their roots in an earlier scale developed by Stanley Kay and colleagues—the Psychopathology Rating Schedule—briefly described by Singh and Kay.[8] Although all 18 items from the BPRS are retained, the definitions of items in the PANSS do not always correspond to those in the BPRS.

SCALE MODIFICATION

By 1978, the original 1962 article describing the BPRS was designated a "citation classic," having received over 500 citations. A more recent Google search noted that it has now been cited over 10,000 times.

The value of the BPRS is perhaps best attested to by the numerous modifications that were made to it over the years, most of which continued to incorporate the name of the scale in some fashion. To note some of the most important developments:

- There were numerous efforts made to include definitions in the printed versions of the scale itself. Efforts were made to define the anchor points for the ratings. In the original scale, they are all seven-point ratings ranging from 1= not present to 7= extremely severe. Woerner and colleagues provided a widely used version of the BPRS with detailed anchors.[9]
- Other efforts were made to expand the number of items in the scale in order to provide a more comprehensive assessment of areas that seemed to be under-represented.[10]
- Some versions (often without citation) added items, defined anchors, reordered the scale to group those based on observation and those based on report together, and offered probe questions to guide the interviewer. One found online is called BPRS 4.0 and is un-authored.
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CONCLUSION

One definition of value is when a trademark is used as a generic; Kleenex and Jello come to mind. From that perspective, the BPRS became the name for numerous scales that went far beyond the original. Perhaps the distinction of the PANSS is that it changed the terrain by creating both a new name and a brand. With its remarkable utility in the development of new antipsychotic medications and other treatments in schizophrenia and psychotic disorders today, the PANSS will help to shape the future of assessment tools, and ultimately psychiatric research.

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